

CLAIMS

1. An aqueous phytopathological formulation comprising:

5 - a hydrosoluble salt of at least one aminophosphate or aminophosphonate type herbicide;

- at least one principal surfactant selected from alkylbetaines and alkyl(amidoalkyl)betaines; and

- at least one additive selected from at least one of the following compounds:

(i) amines or etheramines comprising at least one hydrocarbon radical containing 2 to 24 carbon atoms, optionally polyalkoxylated;

10 (ii) acid or non acid phosphate mono- or di-esters, optionally polyalkoxylated;

(iii) alkali metal, alkaline-earth metal, ammonium, alkylammonium, alkanolammonium, iron, zinc or manganese salts of a mineral acid and

(iv) alkylmonoglycosides or alkylpolyglycosides.

15 2. A formulation according to claim 1, wherein in that the herbicide is a hydrosoluble salt of N-phosphonomethyl glycine.

3. A formulation according to one of the preceding claims, wherein the herbicide content is comprised between 80 and 510 g/l, expressed in acid herbicide equivalents.

20 4. A formulation according to one of the preceding claims, wherein the principal surfactant corresponds to one or more of the following formulae:

(I) $R^1R^2R^2N^+-CH_2COO^-$

25 (II) $R^1R^3HN^+-CH_2-CH_2COO^-$

(III)
$$R^1-N^+-CH_2COO^-$$
$$/ \quad \backslash$$
$$CH_2CH_2OH \quad CH_2-COOM$$

30 (IV)
$$R^2$$
$$/ \quad \backslash$$
$$R^1-CON-(CH_2)_3N^+-CH_2COO^- \quad R^2$$

wherein:

R¹ represents a linear or branched alkyl group containing 3 to 30 carbon atoms, preferably 3 to 20 carbon atoms, such as propyl, dodecyl, hexadecyl, octyl, tetradecyl or a mixture thereof, or an alkamide group, such as dodecanamide;

5 R², which may or may not be identical, represent an alkyl radical, preferably a methyl radical;

R³ represents a hydrogen atom or a -CH₂COOM radical or an alkyl radical;

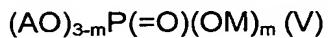
M represents an alkali metal, preferably sodium.

5. A formulation according to one of the preceding claims, wherein the amount of principal 10 surfactant is comprised between 20 and 180 g/l.

6. A formulation according to one of the preceding claims, wherein compound (i), used alone or as a mixture, is selected from amines comprising at least one linear or branched, saturated or unsaturated radical containing 2 to 24 carbon atoms, optionally comprising 8 to 18 15 oxyalkylene motifs, preferably oxyethylene, or a mixture of a plurality thereof; or from etheramines comprising at least one linear or branched, saturated or unsaturated radical containing 6 to 24 carbon atoms, optionally comprising 2 to 30 oxyalkylene motifs, preferably oxyethylene, or a mixture of a plurality thereof.

20 7. A formulation according to one of the preceding claims, wherein the amount of compound (i), if present, is of from 0 to 120 g/l.

8. A formulation according to one of the preceding claims, wherein compound (ii) is selected from acid or non acid phosphate mono- or di-esters, polyalkoxylated with formula (V) 25 below:



wherein:

A, which may or may not be identical, represent a group R'¹-O(CH₂-CHR'²-O)_n wherein:

30 R'¹, which may or may not be identical, represent a linear or non linear, saturated or unsaturated C₆-C₂₀ hydrocarbon radical, preferably C₈-C₁₈;

R'², which may or may not be identical, represent a hydrogen atom or a methyl or ethyl radical;

n is a mean number of motifs in the range 0 to 10;

M, which may or may not be identical, represent a hydrogen atom, an alkali or alkaline-earth metal, a N(R³)₄⁺ type radical in which radicals R³, which may or may not be identical, represent a hydrogen atom or a linear or non linear, saturated or unsaturated C₁-C₆ hydrocarbon radical optionally substituted with a hydroxyl group;

m is a whole number in the range 1 to 2.

9. A formulation according to one of the preceding claims, wherein the amount of compound (ii), if present, is comprised between 0 and 120 g/l.

5 10. A formulation according to one of the preceding claims, wherein compound (iii) is selected from alkali metal, alkaline-earth metal, ammonium or linear or non linear, saturated or unsaturated C₁-C₆ alkylammonium or alkanolammonium sulphates, nitrates or phosphates; or from iron, zinc or manganese sulphates, used alone or as a mixture.

10 11. A formulation according to any one of the preceding claims, wherein that the amount of compound (iii), if present, is comprised between 0 and 200 g/l.

12. A formulation according to one of the preceding claims, wherein compound (iv) is octylglycoside, an octylpolyglycoside, decylglycoside, a decylpolyglycoside, or a mixture thereof.

15 13. A formulation according to one of the preceding claims, wherein the amount of compound (iv), if present, is comprised between 0 and 150 g/l.

14. A formulation according to one of the preceding claims, wherein the proportion by weight 20 of principal surfactant/sum of additives (i) to (iv) is comprised between 6/1 to 1/2.

15. A formulation according to one of the preceding claims, wherein the total amount of principal surfactant and additive(s) represents 60 to 180 g/l of the formulation.